

IN THE CLAIMS:

Please cancel claims 15, 19-27 and 31 without prejudice or disclaimer and amend the remaining claims as follows:

1. (currently amended) A method of decoding a series of encoded binary digital signals using a data structure, said data structure having multiple base indices, said method comprising:

selecting N encoded binary digital signals, N being a value comprising substantially the same number of bits as the number of bits comprising an extreme length code word in said data structure;

comparing said N encoded binary digital signals with two or more entries from said data structure at substantially the same time.

2. (currently amended) The method of claim 1, and further comprising, after the previous ~~comparison~~ comparison:

selecting M encoded binary digital signals for subsequent comparisons, M being a value comprising substantially the same number of bits as the number of bits comprising an extreme code word in said data structure, minus the number of bits that were not decoded in the previous comparison; and

comparing said M encoded binary digital signals with two or more entries from said data structure at substantially the same time.

3. (original) The method of claim 2, and further comprising:

repeating said selecting M encoded binary digital signals and said comparing M encoded binary digital signals until said encoded binary digital signals are substantially decoded.

4. (original) The method of claim 1, wherein the binary digital signals are encoded in accordance with Huffman code.

5. (original) The method of claim 1, wherein the data structure is organized, at least in part, based on code length.

6. (original) The method of claim 1, wherein the data structure is organized in sub groupings of code words having the same code length, the sub groupings being arranged sequentially.

7. (original) The method of claim 1, wherein said extreme length code word comprises the shortest code word in said data structure.

8. (original) The method of claim 1, wherein said extreme length code word comprises the longest code word in said data structure.

9. (original) A method of decoding a series of encoded binary digital signals using a data structure, said data structure having multiple base indices and multiple base codes, said method comprising:

selecting a set of N encoded binary digital signals, N being a value at least as great in length as an associated base code, wherein a set of N encoded binary digital signals is selected for substantially each base code in an associated data structure; and

comparing one or more said sets of N encoded binary digital signals with the associated base codes at substantially the same time.

10. (currently amended) The method of claim 9, and further comprising, after the previous ~~comparision~~ comparison:

selecting a set of M encoded binary digital signals for subsequent comparisons, M being a value at least as great in length as an associated base code, wherein a set of M encoded binary digital signals is selected for substantially each base code in an associated data structure; and

comparing one or more said sets of M encoded binary digital signals with the associated base codes at substantially the same time.

11. (original) The method of claim 10, and further comprising:
repeating said selecting M encoded binary digital signals and said
comparing M encoded binary digital signals until said encoded binary digital signals are
substantially decoded.
12. (original) The method of claim 9, wherein the binary digital signals are
encoded in accordance with a Huffman code.
13. (original) The method of claim 9, wherein the data structure is organized,
at least in part, based on code length.
14. (original) The method of claim 9, wherein the data structure is organized
in sub groupings of code words having the same code length, the sub groupings being
arranged sequentially.
15. (canceled).
16. (currently amended) ~~The~~ An apparatus of claim 15, and further for
decoding a series of encoded binary digital signals comprising:
at least one base code register and at least one base index register, wherein
said registers are configured to read values from an associated data structure by applying
the contents of said registers to an input signal, to produce an index;
at least one subtractor;
at least one daisy chain circuit; and
at least one adder, wherein said at least one subtractor is configured to
receive at least a portion of the contents of said at least one base code register, and is
configured to receive one or more encoded binary digital signals, wherein said at least
one daisy chain circuit is coupled to said at least one subtractor, and is configured to
provide an output to said at least one base index register, wherein said at least one adder
is configured to receive an input from said at least one base index register and said at
least one subtractor.

17. (original) The apparatus of claim 16, wherein said at least one subtractor, said at least one adder, and said at least one daisy chain circuit are embodied on a single integrated circuit.

18. (original) The apparatus of claim 16, wherein said adder is configured to access an associated data structure and use said index to substantially decode at least one code word.

19-27. (canceled).

28. (currently amended) ~~The~~ A data structure of ~~claim 19~~ code words, the code words being arranged in sub groupings, comprising at least one of the following:

code word length;

base code;

reference code; and

base index,

wherein the reference code comprises the base code of the corresponding set of code words, wherein the base code comprises a length substantially equal to the length of an extreme length base code for a given set of code words.

29. (currently amended) ~~The~~ A data structure of ~~claim 19~~ code words, the code words being arranged in sub groupings, comprising at least one of the following:

code word length;

base code;

reference code; and

base index,

wherein the base index comprises the number of individual Huffman codes that are contained within a given set of Huffman code words.

30. (currently amended) ~~The~~ A data structure of claim 19 code words, the
code words being arranged in sub groupings, comprising at least one of the following:

code word length;

base code;

reference code; and

base index,

wherein the base index is equal to the value (-1) in the corresponding set of Huffman values if there are no corresponding Huffman codes of the corresponding length.

31. (canceled).

32. (currently amended) ~~The~~ A method of claim 31 of creating a data structure
for decoding code words, and further said method comprising:

sorting said code words by code length;

ordering the code words of the same lengths sequentially;

maintaining the code of the initial code word of a set of code words of a
particular length and the total number of code words of the same length; and

determining a base index for at least one sub_grouping of code words,
wherein the base index comprises the lexicographically consecutive position of the first
code word of a given sub_grouping within the entire set of code words.

33. (currently amended) ~~The~~ A method of claim 31 of creating a data structure
for decoding code words, and further said method comprising:

sorting said code words by code length;

ordering the code words of the same lengths sequentially;

maintaining the code of the initial code word of a set of code words of a
particular length and the total number of code words of the same length; and

determining a base code for at least one sub grouping of code words,
wherein the base code comprises the lexicographically first code word in a given sub
grouping within the entire set of code words.

34. (currently amended) An article comprising:

a storage medium having stored thereon instructions, that when executed by a computing platform, result in a method of decoding a series of binary digital signals using a data structure, wherein said data structure has multiple base indices, being executed, said method comprising:

selecting N encoded binary digital signals, N being a value comprising substantially the same number of bits as the number of bits comprising an extreme code word in said data structure;

comparing said N encoded binary digital signals with two or more entries from said data structure at substantially the same time.

35. (original) The article of claim 34, having stored thereon instructions that when executed further result in :

after the previous comparison:

selecting M encoded binary digital signals for subsequent comparisons, M being a value comprising substantially the same number of bits as the number of bits comprising an extreme code word in said data structure, minus the number of bits that were not decoded in the previous comparison; and

comparing said M encoded binary digital signals with two or more entries from said data structure at substantially the same time.

36. (original) The article of claim 34, having stored thereon instructions that when executed further result in :

repeating said selecting M encoded binary digital signals and said comparing M encoded binary digital signals until said encoded binary digital signals are substantially decoded.

37. (original) The article of claim 34, wherein the method of decoding, when executed, is capable of decoding binary digital signals that have been encoded in accordance with a Huffman code.

38. (currently amended) A system for decoding a series of binary digital signals, comprising:

a computing platform;

said computing platform being adapted to, in operation, perform the method of decoding a series of binary digital signals using a data structure, wherein said data structure has multiple base indices, said method comprising:

selecting N encoded binary digital signals, N being a value comprising substantially the same number of bits as the number of bits comprising an extreme code word in said data structure;

comparing said N encoded binary digital signals with two or more entries from said data structure at substantially the same time.

39. (original) The system of claim 38, wherein said method further comprises, after the previous comparison:

selecting M encoded binary digital signals for subsequent comparisons, M being a value comprising substantially the same number of bits as the number of bits comprising an extreme code word in said data structure, minus the number of bits that were not decoded in the previous comparison; and

comparing said M encoded binary digital signals with two or more entries from said data structure at substantially the same time.

40. (original) The system of claim 38, wherein said method further comprises: repeating said selecting M encoded binary digital signals and said comparing M encoded binary digital signals until said encoded binary digital signals are substantially decoded.

41. (original) The system of claim 38, wherein the method of decoding, when executed, is capable of decoding the binary digital signals that have been encoded in accordance with a Huffman code.